

frequently unnecessary for this purpose. Therefore all of those furnaces which are provided with working openings or doors operate without " draft."⁷⁷ This fact will be established.

Consider any reverberatory furnace (Fig. 13) when in operation. The doors are never hermetically tight to the walls, and a flame or sting escapes from the interstices at the top of the door. If a

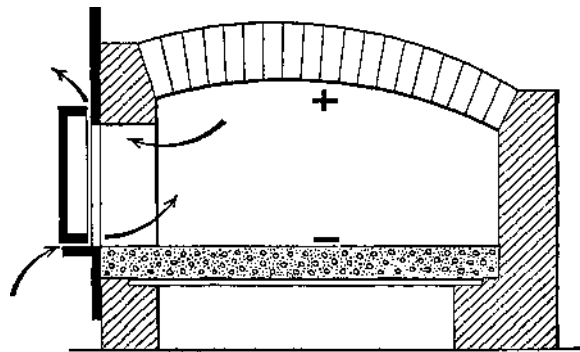
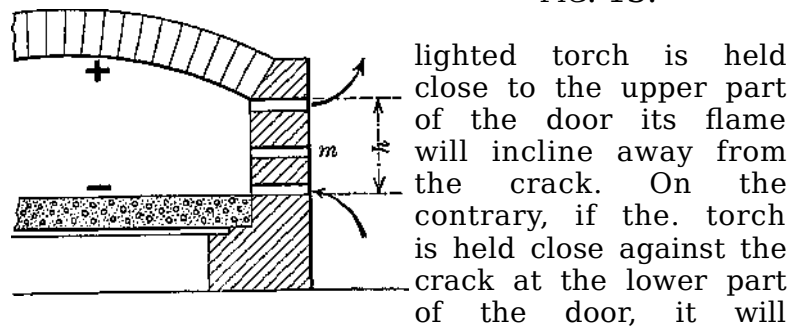


FIG. 13.



be noticed that the flame will be drawn into the furnace. It can be stated, therefore, that immediately below the roof of the furnace the pressure of the hot gases inside the furnaces is higher than the atmospheric pressure at that level; whereas, at the level corresponding to the lower part of the furnace the pressure of the hot gases is less than the atmospheric pressure, that is to say, *negative* with regard to the pressure at the roof of the furnace.

If two openings are made in the walls of this furnace (Fig. 14), one at the level of the sole, the other at the level

FIG.

14.
of the roof, the phenomena will be the same. By the lower opening the

external air will be